Infectious Disease Complications of Injection Drug Use

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The syndemic of injection drug use and infectious disease

Surveillance data that provide evidence of the syndemic

Data from rural and urban surveys of people who inject drugs (PWID)

Public health implications
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Public health implications
What is a syndemic?
Synergistic Epidemic
Why think syndemically?
Simultaneously considers distal and proximal causes of health inequities

Identifies diverse stakeholders and allies

Promotes effective surveillance practices

Establishes appropriate metrics/indicators for monitoring and evaluation

Guides interventions and policies to improve health

Stimulates multi-level action across systems, institutions, and structures
Substance Use

- Alcohol, prescription and OTC drugs with misuse potential
- Illegal drugs with misuse potential

Substance Misuse

- Neonatal Abstinence Syndrome
- Fetal Alcohol Spectrum Disorders

Substance Use Disorder (SUD), including Opioid Use Disorder (OUD)

Transition to IDU

Injection Drug Use (IDU)

- Overdose
  - Morbidity and Mortality
  - Suicidality
- Sexually Transmitted Infections (STIs): Syphilis, chlamydia, gonorrhea, genital herpes, HIV, HBV and HCV
- HBV
- HIV
- HCV

Injection Drug Use (IDU) related infections such as skin and soft tissue infections, bacteremia/sepsis, endocarditis, osteomyelitis, HIV, HBV, and HCV

Note:
1. Substance misuse is defined as the use of a substance for a purpose not consistent with legal or medical guidelines.
2. Root social and economic issues underlie the model, including Adverse Childhood Experiences (ACEs) and toxic stress that
   - Affect the access to and availability of resources to prevent, respond and recover
   - Influence experience of risk or protective factors, and
   - Shape individual level physical and emotional health, resilience and risk behaviors

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Public health implications
HIV diagnoses among PWID are increasing in the context of increasing meth + heroin use.
PWID diagnosed with HIV are most likely to use meth or meth + heroin, 2013-2018
People who inject drugs are less likely to be virally suppressed.
Early syphilis among women has increased 600% with an increase in congenital syphilis.

Cases of congenital syphilis

Cases early syphilis per 100,000 population

Year

2013 2014 2015 2016 2017 2018

Early syphilis among women has increased 600% with an increase in congenital syphilis.
More heterosexuals diagnosed with syphilis are reporting injection drug (meth) use.
Injection drug use and meth + opiate use are associated with transactional sex among women in PDX.

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<thead>
<tr>
<th>Characteristic</th>
<th>Did not report transactional sex, %</th>
<th>Reported transactional sex, %</th>
<th>Adjusted RR (95% CI)</th>
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<tbody>
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<td>56.8</td>
<td>1.94 (1.24, 3.03)</td>
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There is now a more pronounced bimodal distribution of chronic HCV infection.
SBI hospitalizations related to injection drug use account for an increasing proportion of all hospitalizations over time.
Rural counties experience high rates of SBI hospitalizations related to injection drug use.
Opioids account for the largest proportion of SBI hospitalizations related to injection drug use.

- Opioids, n= 9,417 (62%)
- Amphetamines, n= 3,626 (24%)
- Cocaine, n=324 (2%)
- Other drugs, n=1,350 (9%)
The cost of SBI hospitalizations related to injection drug use exceeded $200 million in 2015.
Outline

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Public health implications
National HIV Behavioral Surveillance i.e., “Chime In”

Purpose: Monitor HIV risk behaviors and prevention service use in the Portland metropolitan area

Key populations
- High risk heterosexuals
- Men who have sex with men
- People who inject drugs
Oregon HIV/Hepatitis and Opioid Prevention and Engagement

Purpose: Assess opioid use disorder, HCV/HIV transmission and treatment access in rural Oregon and pilot appropriate interventions
Data Collection

NHBS
- Review of secondary demographic, behavioral and incidence data
- Professional key informant interviews and focus groups
- Community member key informant interviews
- Social-behavioral survey and HIV/HCV testing

OR-HOPE
- Review of policies, resources, county level health outcomes, and stakeholder interviews
- Substance use and HCV treatment prescription counts
- Risk assessment surveys Qualitative interviews
**PWID Survey Recruitment**

**NHBS**
- ✔️ Respondent driven sampling
- ✔️ Live in sampling area
- ✔️ ≥18 years old
- ❏ English or Spanish speaking
- ✔️ Injection drug use in past 12 months

**Eligibility**

**OR-HOPE**
- ✔️ Respondent driven sampling
- ✔️ Live in sampling area
- ✔️ ≥18 years old
- ❏ English speaking
- ✔️ Injection drug use in past OR recreational prescription opioid non-injection drugs use in the past 30 days
Key Findings
...people usually hang out with people that look like them... street families form and connect with other street families.

- NHBS Participant
60% Male

NHBS

56% Male

OR-HOPE
If I was in a place, it would be so much easier for me. I probably wouldn’t use meth or heroin anymore. I would just take my medicine and go home, but I don’t have a home.

OR-HOPE Participant
Risk Factors

NHBS

76%
Experienced homelessness in past year

50%
Arrested in past 6 months

OR-HOPE

70%
Experienced homelessness in past year

52%
Arrested in past 6 months
I’d rather do heroin, but meth is so much cheaper and easier to get.
Injection Drug of Choice

NHBS

- Heroin
- Meth
- Goofballs
- Speedballs
- Painkillers

*Past 12 months

OR-HOPE

- Heroin
- Meth
- Other

*Past 30 days
I would be afraid that family would see my car parked out front, or I would run into somebody with a bag in my hand. I take a huge risk by going into Walmart and asking for [sterile needles], too.
Sources of sterile needles

- Needle or syringe exchange: 90%
- Someone who got them at a needle or syringe exchange: 80%
- Pharmacy or drug store: 50%
- Doctor's office, clinic or hospital: 10%
- HIV/AIDS service organization: 5%
- Other: 10%

Acquisition of sterile needles
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<td>Shared equipment with others</td>
<td>73%</td>
</tr>
<tr>
<td>Used cooker/cotton/water after someone</td>
<td>67%</td>
</tr>
<tr>
<td>Gave needle to someone after using</td>
<td>52%</td>
</tr>
<tr>
<td>Used needle after someone else</td>
<td>42%</td>
</tr>
<tr>
<td>Used drugs divided by a used needle</td>
<td>37%</td>
</tr>
<tr>
<td>Had multiple sharing partners in past year</td>
<td>68%</td>
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Overdose
NHBS

26% Experienced an overdose

OR-HOPE

41% Experienced an overdose
NHBS

- 26% Experienced an overdose
- 74% Witnessed an overdose

OR-HOPE

- 41% Experienced an overdose
- 73% Witnessed an overdose
NHBS

26% Experienced an overdose

74% Witnessed an overdose

59% Currently own naloxone

OR-HOPE

41% Experienced an overdose

73% Witnessed an overdose

27% Currently have naloxone
I wish that there were more doctors around here who did the methadone or Suboxone programs and stuff. There are hardly any here in town, and there are waiting lists and it’s hard to get in. It’s really hard to wait.
[They need help] filling out applications, people shut down because they feel too overwhelmed
Participants received substance use treatment: 49%

Participants wanted to get into a treatment program but were unable: 29%

Participants received substance use treatment: 41%

Participants wanted to get into a treatment program but were unable: 23%
People call the cops when someone is in their car for too long, even if they’re a non-user.
IDU-related Stigma

Fear of being judged about injection drug use prevented:

- 29% from accessing an emergency room
- 15% from accessing Methadone or suboxone treatment
- 13% from accessing a wound clinic
- 12% from accessing HIV/STI testing
Hepatitis C

NHBS

OR-HOPE

Self-reported positive, not treated

Self-reported positive, treated

New positive

Negative

Self-reported positive, not treated

New positive

Negative
Among those who were not living with HIV and had received an HIV test

Had heard of PrEP

NHBS: 16%

OR-HOPE: 62%

PrEP Awareness
Summary of findings

- PWID are predominately \textit{(not exclusively)} White, middle-aged, men

- PWID are likely to experience homelessness and interact with the criminal justice system

- Many PWID inject both heroin and meth, but meth may be more common in rural OR

- PWID are acquiring sterile needles, but barriers to safe injection behaviors remain
Summary of findings - continued

- Most PWID have experienced or witnessed an overdose, but far fewer carry Naloxone, especially in rural areas.

- PWID are interested in treatment, but many get turned away, even in the Portland metropolitan area.

- Hepatitis C is common among PWID, but many do not know they are infected and most do not receive treatment.

- PrEP awareness among PWID varies greatly.
Putting it Together

- Injection drug use contributes to recent increases in HIV, syphilis, and HCV in Oregon

- Serious bacterial infections attributable to injection drug use are increasing

- While PWID access SSPs and clearly put harm reduction practices into action, barriers to diagnosis and treatment of infectious disease complications of injection drug use are formidable

- However, access to MOUD and knowledgeable, compassionate providers is severely limited
Public health strategies to support drug user health

- Expansion of HCV, HIV, STI screening among PWID
  - Opt-out, panel-based testing for people who use drugs
  - Drug treatment programs and correctional facilities

- Continue to expand syringe services
  - Population-specific exchanges
  - Rural areas

- Integrate medical and behavioral health into syringe exchange
  - Or, (better yet) integrate syringe exchange into medical and behavioral healthcare settings
Public health strategies to support drug user health

- Expand access to curative therapies
  - Medicaid will now cover HCV treatment regardless of fibrosis status
  - Target discrete subgroups (i.e., micro-elimination)
- Educate health care providers to provide comprehensive and effective care for PWID including:
  - HCV screening and treatment
  - MOUD and referrals to other substance use treatment
  - Mental health care
  - Discussions around risk reduction (e.g., safe injection and PrEP)
- Recruit and nurture providers who want to serve PWID
How can we empower people who inject drugs?

- Increase access to naloxone
- Support peer-to-peer harm reduction that is already at work in the community
  - Peer-to-peer naloxone distribution
  - Peer-to-peer syringe/works distribution and exchange
  - Hub and spoke models
- Peer-based interventions to improve access to screening, HCV treatment, HIV treatment, substance use treatment, PrEP
  - No wrong door to access treatment